Global Consensus on the Management of Limbal Stem Cell Deficiency.

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Public Summary:
Due to the rapid evolving medical and surgical treatment of limbal stem cell deficiency (LSCD), due to the lack or deficiency of the corneal stem cells, there is the need to establish a global consensus on the preferred approaches to treat this disease. An international LSCD Working Group was established by the Cornea Society in 2012 and divided into subcommittees. A writing group drafted the current study. This global consensus provides an up-to-date and comprehensive framework for the management of LSCD.

Scientific Abstract:
PURPOSE: In recent decades, the medical and surgical treatment of limbal stem cell deficiency (LSCD) has evolved significantly through the incorporation of innovative pharmacological strategies, surgical techniques, bioengineering, and cell therapy. With such a wide variety of options, there is a need to establish a global consensus on the preferred approaches for the medical and surgical treatment of LSCD. METHODS: An international LSCD Working Group was established by the Cornea Society in 2012 and divided into subcommittees. Four face-to-face meetings, frequent email discussions, and teleconferences were conducted since then to reach agreement on a strategic plan and methods after a comprehensive literature search. A writing group drafted the current study. RESULTS: A consensus in the medical and surgical management of LSCD was reached by the Working Group. Optimization of the ocular surface by eyelid and conjunctival reconstruction, antiinflammatory therapy, dry eye and meibomian gland dysfunction treatment, minimization of ocular surface toxicity from medications, topical medications that promote epithelialization, and use of a scleral lens is considered essential before surgical treatment of LSCD. Depending on the laterality, cause, and stage of LSCD, surgical strategies including conjunctival epitheliectomy, amniotic membrane transplantation, transplantation of limbal stem cells using different techniques and sources (allogeneic vs. autologous vs. ex vivo-cultivated), transplantation of oral mucosal epithelium, and keratoprosthesis can be performed as treatment. A stepwise flowchart for use in treatment decision-making was established. CONCLUSIONS: This global consensus provides an up-to-date and comprehensive framework for the management of LSCD.